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simulation capability is integrated into Xact Measure and Xact Vision metrology software from Brown & Sharpe Information Systems, Inc. The portions of Xact Measure and Xact Vision that provide the simulation capability could alternately be integrated with correctional measurement software PC-DMIS from Brown & Sharpe, Inc. and Quadra-Check from Metronics, Inc. Simulation of the measurement frame hardware is performed by a layer of software referred to as a virtual measuring instrument (VMI). The VMI may be implemented as a device driver in a Microsoft Windows environment. Operation of the VMI is discussed in further detail, below.

Please replace the paragraph beginning at line 13 of page 5 as shown.

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Next, a model of a part to be measured is loaded into the simulated measurement system 102. The illustrative embodiment supports a variety of CAD file formats in which the model may be represented, including, but not limited to, DWG, DXF, SAT, IGES, VDA/FS, STEP, CATIA, UG, Parasolids, Pro/E, IDEAS CAD, etc. formats corresponding to several popular CAD programs. The model should be a 3D model. If the measurement frame simulated by the VMI is a vision measurement system, for example employing a camera to capture information, the CAD model of the part should include fully modeled surfaces.

Please replace the paragraph beginning at line 28 of page 5 as shown.

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Parameters within the VMI are adjusted to simulate a particular desired spatial relationship between the modeled part and the simulated measurement system 103. The spatial relationship may be fully specified, relative to a fixed datum established in the model, in terms of x, y and z position, as well as α , β and γ rotations of the simulated measurement system, relative to the datum.

Please replace the paragraph beginning at line 3 of page 6 as shown.

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An image of the modeled part is rendered 104, taking into account the spatial relationship established, as well as such other parameters as may be required. If a vision measurement system is being simulated by the VMI, then some of the parameters upon which the rendering